

# Bacteria TMDL Development James River – City of Richmond

## *Q&A and Public Meetings*

June 30, 2010  
Richmond, VA





# *Focus of Today's Meetings...*

**Gillies Creek – tributary of the Tidal James River**

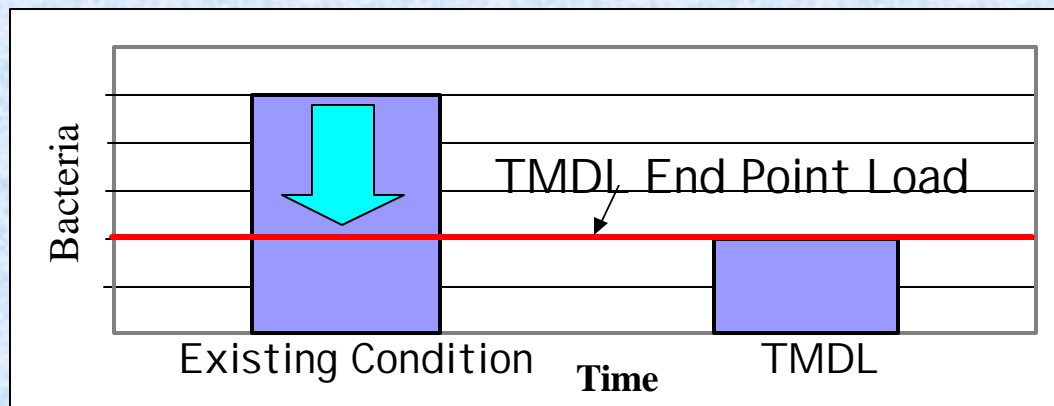


# *What is a TMDL?*

TMDL = Total Maximum Daily Load = maximum amount of a pollutant that can exist in a waterbody without violating water quality standards (WQS)

$WLA + LA + MOS = TMDL$       TMDL example:  $2.39E+12$

WQS = numeric or narrative limits on pollutants that ensure the protection of human health and of aquatic life (= endpoint)



**Reducing existing bacteria load to the TMDL end point load is expected to restore water quality.**

# *Why are TMDL studies necessary?*

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- ❑ TMDLs must be developed for water bodies that do not meet water quality standards (impaired waters) per Clean Water Act.

**The pollutant of interest in this  
TMDL is Bacteria**

- ❑ Impaired waters occur throughout Virginia in lakes, streams, and tidal waters.
- ❑ In Virginia, ~1100 TMDLs due by 2020

# *TMDL Endpoint*

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- ❑ In any TMDL, the “endpoint” is the water quality standard (WQS) for the given pollutant
- ❑ There are 2 WQSs for bacteria in free-flowing waters (*E.coli* is indicator organism):
  - ❑ 126 cfu/100 ml geometric mean
    - Cannot have any violation of the standard
    - Minimum of 4 samples in a month ~ 1/week
  - ❑ 235 cfu/100 ml instantaneous sample
    - 10.5% violation of the standard is allowed
    - No minimum sample # required



# *What information is used to develop a TMDL?*

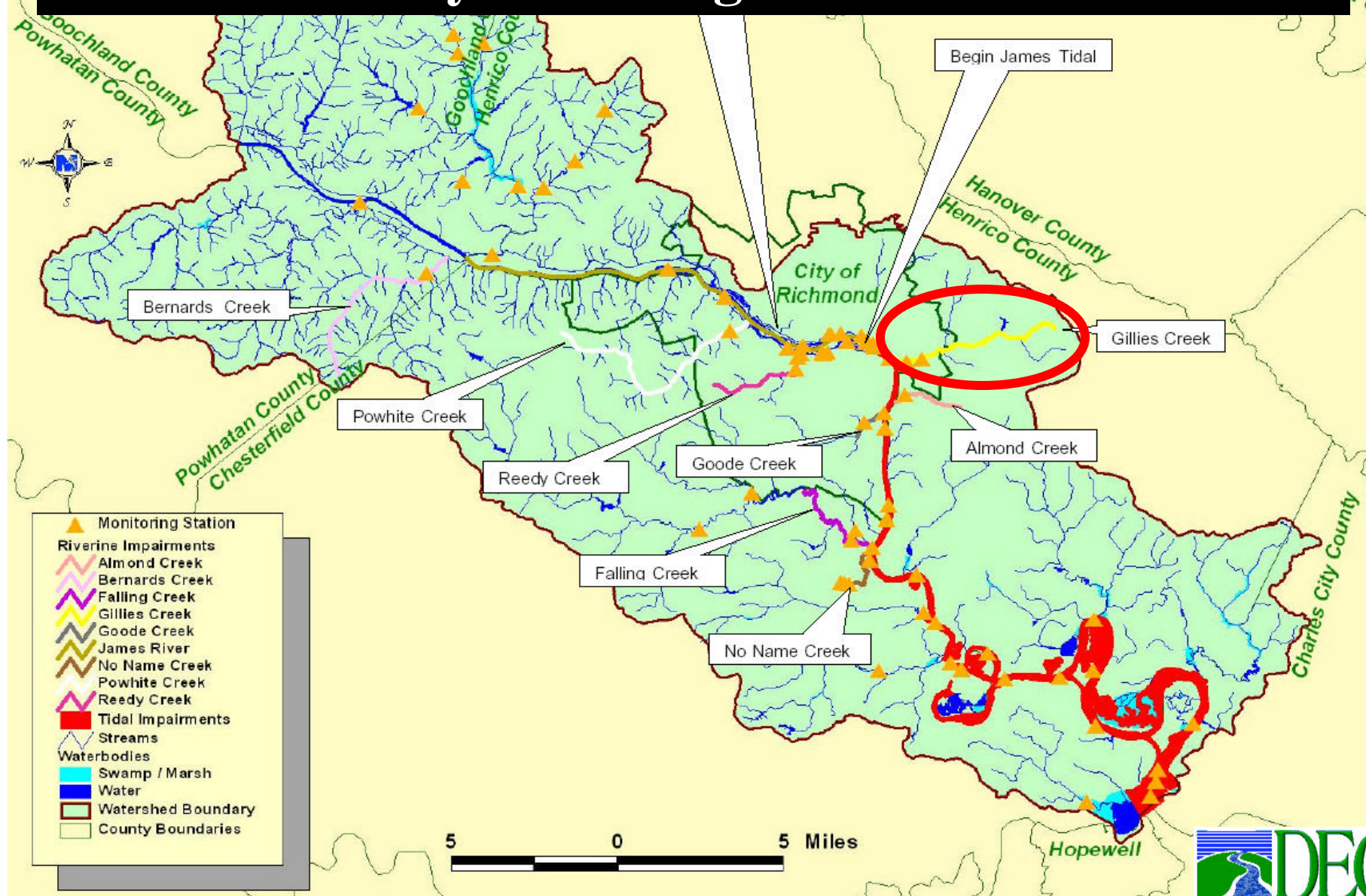
- Bacteria monitoring data
- Population, wildlife, and land use data, including DGIF, etc., R,
- Affecting land use, including (R, )
- Bacteria monitoring data
- Land use data
- DEQ permit data
- DEQ spill response and remediation data

All of this information was shared during the first two public meetings and scrutinized in the first 2 comment periods

# *A “Brief” Recap of this TMDL Development...*

- Kickoff meeting (5 James TMDL studies introduced) 4/2006
- First TAC meeting 7/2006 & public meeting 8/2006
- Second TAC held 3/2007
- Triennial review – DEQ delayed further TMDL development for the SWCB’s decision on primary contact standard (no change to standard was made)
- (2) “Final” public meetings held 3/2009 for draft v76
- By December 2009, new draft led to another public comment period on revised draft v77
- Issues related to Gillies Creek bacteria reductions led DEQ to request EPA for an extension of May 1, 2010 Consent Decree deadline (granted – extended deadline is Oct. 1, 2010)
- Negotiations continued through late winter and spring 2010
- Public Meetings on revised TMDL v79 6/30/2010

# Focus of Today's Meetings will be Gillies Creek





# Gillies Creek

- Lower 1.7 miles of creek channelized in 1960s
- Lower portion of creek has 6 CSOs (Combined Sewer Overflows) owned by City of Richmond – rainfall events result in combo of stormwater and untreated sewage discharged to stream
- Upper portion (un-channelized) has 1 CSO and Pump Station (Henrico Co)
- Gillies Creek final TMDL must meet WQS – which calls for 95% reduction of bacteria beyond the City or Richmond's Long Term Control Plan (LTCP) for CSOs



## COMBINED SEWER OVERFLOW NOTICE

This is a combined sewer overflow location for  
Bloody Run Outfall, Outfall #004

Latitude: N37° 31' 23" Longitude W77° 25' 00"

During or after heavy or long rain events, combined storm water and sanitary sewage may be discharged into the James River at this location. Following such events, it is recommended that persons avoid contact with the water at and around the vicinity of this location because temporary contamination is likely. For further information, contact: City of Richmond Department of Public Utilities at (804) 644-3000 or visit the web site at

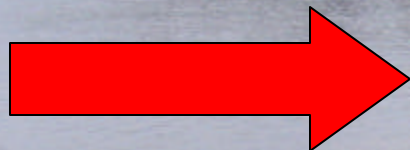
[www.richmondgov.com](http://www.richmondgov.com)

CSO Website

<http://www.richmondgov.com/Departments/publicutilities/cso.aspx>







# Gillies Creek and the James River

# Virginia's TMDL Development Process

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- ☑ Public notice for TMDL development
- ☑ TMDL study
- ☑ Public notice for Draft TMDL (v79)
- ☐ Submit final TMDL to SWCB 9/2010
- ☐ Submit final TMDL to EPA no later than 10/1/10 (...or EPA resumes responsibility)
- ☐ Implementation Planning
- ☐ Implementation

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input and participation! \* \*



# Questions?

***Presentations and other handouts available at:***  
**<http://www.deq.virginia.gov/tmdl/mtgppt.html>**

***Draft Report Link:***  
**<https://www.deq.virginia.gov/TMDLDataSearch/DraftReports.aspx>**

**Please send written comments or questions to:**

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Attn: Margaret Smigo  
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Glen Allen, VA 23060

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TMDL Website: <http://www.deq.virginia.gov/tmdl>

